UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,617	09/29/2000	Robert Dunstan	042390.P9731	9612

7590 08/05/2004

John Patrick Ward Esq
Blakely Sokoloff Taylor & Zafman LLP
Seventh Floor
12400 Wilshire Boulevard
Los Angeles, CA 90025-1026

EXAMINER	
DU, THUAN N	

ART UNIT	PAPER NUMBER
2116	9

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/675,617	DUNSTAN ET AL.	
	Examiner	Art Unit	
	Thuan N. Du	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *6-11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 12-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment A (dated 3/29/04).

2. Claims 6-11 have been withdrawn. Claims 1-5 and 12-23 are presented for examination.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1-3, 5, 12, 14, 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chrysanthakopoulos (U.S. Patent No. 6,446,214).

5. **Regarding claim 1**, Chrysanthakopoulos teaches a method for controlling a power state of an autonomous subsystem ("intelligent" peripheral devices) [peripheral device is a subsystem of a computer system; col. 3, lines 8-23] comprising the steps of:

receiving from the subsystem a message (unsolicited request is a message) [col. 4, lines 1-5]; and

setting the power state of the autonomous subsystem based on the message [col. 4, lines 9-16].

6. **Regarding claim 2**, Chrysanthakopoulos teaches the device is changed from an inactive state (power down state) to an active state (power up state) when activity resumes (the device is in normal operation state to perform activities) [col. 3, lines 17-19]. Therefore, Chrysanthakopoulos teaches the message is a full wakeup request as claimed.

7. **Regarding claim 3**, Chrysanthakopoulos acknowledging a received autonomous subsystem message by "sends any requests to the peripheral device that are warranted by the power change" in response to the power state change request sent by the "intelligent" peripheral device [col. 4, lines 17-21].

8. **Regarding claim 5**, Chrysanthakopoulos teaches that the power state of the autonomous subsystem is set without involvement of a main operating system [col. 3, lines 8-14].

9. **Regarding claim 12**, Chrysanthakopoulos teaches a storage medium having stored thereon instructions [col. 3, lines 5-6] used to perform the following:

receive input signals [col. 4, lines 3-5];

communicate with an autonomous subsystem ("intelligent" peripheral device is a subsystem of a computer system) [col. 3, lines 8-23; col. 4, lines 1-5 and 17-19];

determine a desired power state for the autonomous subsystem based upon received input signals and communications with the autonomous subsystem [col. 4, lines 9-16]; and

communicate to the autonomous subsystem the desired power state [col. 4, lines 27-30 and 35-36].

10. **Regarding claim 14**, Chrysanthakopoulos teaches the autonomous subsystem acknowledges a communication received (command that sets the peripheral device in the desired power state) from the host [col. 4, lines 27-30 and 35-36] by changing its power state to the desired power state [col. 4, lines 37-39].

11. **Regarding claim 18**, Chrysanthakopoulos teaches an apparatus for controlling subsystem power comprising:

means for receiving input signals [col. 4, lines 3-5];

means for communicating with an autonomous subsystem ("intelligent" peripheral device is a subsystem of a computer system) [col. 3, lines 8-23; col. 4, lines 1-5 and 17-19];

means for determining a desired power state for the autonomous subsystem based upon received input signals and communications with the autonomous subsystem [col. 4, lines 9-16]; and

means for communicating to the autonomous subsystem the desired power state [col. 4, lines 27-30 and 35-36].

12. **Regarding claim 20**, Chrysanthakopoulos teaches the autonomous subsystem acknowledges a communication (command that sets the "intelligent" peripheral device in the desired power state) from the host [col. 4, lines 27-30 and 35-36] by changing its power state to the desired power state [col. 4, lines 37-39].

Claim Rejections - 35 USC § 103

13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chrysanthakopoulos (U.S. Patent No. 6,446,214) in view of Jones (U.S. Patent No. 5,809,311).

14. **Regarding claim 4**, Chrysanthakopoulos does not teach the message from the autonomous subsystem is received without involvement of a main operating system.

Jones teaches a management controller (260) controls other subsystems (210, 220, 240) independent from operating system [col. 4, lines 44-49]. In operation, Jones teaches the step of receiving from the subsystems message(s) indicating status of the subsystem [col. 5, lines 5-8, 22-25]. Therefore, Jones teaches the claimed method step of receiving from the subsystem a message without involvement of a main operating system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chrysanthakopoulos and Jones because they both teach system for controlling power in a computer system. Jones' teaching of controlling other subsystem by the management controller independent from operating system would increase the flexibility of Chrysanthakopoulos' system by allowing the system to have an additional controller for controlling the power of subsystem which is not required to be tracked by the operating system.

15. Claims 13 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chrysanthakopoulos (U.S. Patent No. 6,446,214) in view of Woog et al. [Woog] (U.S. Patent No. 5,630,144).

16. **Regarding claim 13**, both Chrysanthakopoulos and Woog do not explicitly teach the input signal is a user initiated signal. Woog teaches a power management system comprising a power control system (100) which detects input signal (activity) from input device for controlling the power of a subsystem (monitor 120) accordingly [col. 6, lines 50-55]. However, one of ordinary skill in the art would have readily recognized that the activity of the input device is obviously initiated by a user (user moves a mouse or presses a key on a keyboard).

17. **Regarding claim 19**, both Chrysanthakopoulos and Woog do not explicitly teach the input signal is a user initiated signal. Woog teaches a power management system comprising a power control system (100) which detects input signal (activity) from input device for controlling the power of a subsystem (monitor 120) accordingly [col. 6, lines 50-55]. However,

one of ordinary skill in the art would have readily recognized that the activity of the input device is obviously initiated by a user (user moves a mouse or presses a key on a keyboard).

18. Claims 15, 17, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woog et al. [Woog] (U.S. Patent No. 5,630,144) in view of Chrysanthakopoulos (U.S. Patent No. 6,446,214) and further in view of Arai et al. [Arai] (U.S. Patent No. 5,978,922).

19. **Regarding claim 15**, Woog teaches a system comprising:

a power state controller [power control unit 150] having an input port [input port for receiving input signal from keyboard controller 130], and output port [port for outputting signal to monitor 120], and a communications channel [the line coupled between power control unit 150 and monitor 120];

a user input [keyboard 140] coupled to the power state controller input port [keyboard 140 is coupled to power control unit 150 through the keyboard controller 130]; and

a subsystem [monitor 120] coupled to the power state controller output port and the power state controller communications channel [the monitor 120 is coupled to the power control unit 150 for receiving signal outputted from the power control unit through the line connected between the monitor and the power control unit].

Woog does not explicitly teach the subsystem (monitor 120) is an autonomous subsystem.

Chrysanthakopoulos teaches a system for controlling a power state of a subsystem, wherein the subsystem is an autonomous subsystem ("intelligent" peripheral devices, e.g. monitor 50) [col. 3, lines 8-23].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Woog by using the "intelligent" monitor taught by Chrysanthakopoulos, instead of Woog's monitor. The modification would increase the reliability of the system by reducing workload for the host system.

Both Woog and Chrysanthakopoulos do not teach the system including an energy monitor signal coupled to the power state controller.

Arai teaches a power management system comprising an energy monitor signal coupled to a power controller (controller 8) input port [signal inputted to the controller 8 to indicate the remaining power in a power source].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog-Chrysanthakopoulos and Arai because they both teach system for controlling power in a computer system. Arai's teaching of monitoring the power level of the power source would increase the flexibility of Woog-Chrysanthakopoulos' system by allowing the power control unit of Woog-Chrysanthakopoulos can also monitor power level of power source to ensure the power source has sufficient power for providing to the subsystem.

20. **Regarding claim 17**, Woog-Chrysanthakopoulos do not teach the system including an energy monitor signal coupled to the power state controller for indicating the remaining battery capacity.

Arai teaches a power management system comprising an energy monitor signal coupled to a power controller (controller 8) input port [signal inputted to the controller 8 to indicate the

remaining power in a power source] for indicating the remaining battery capacity [col. 5, lines 33-35].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog-Chrysanthakopoulos and Arai because it would increase the flexibility of the system by allowing the power control unit of Woog-Chrysanthakopoulos can also monitor power level of power source to ensure the power source has sufficient power for providing to the subsystem.

21. **Regarding claim 21**, Woog teach a computer based system (computer 50), comprising:

an energy source (power main 160) [Fig. 1];

a power state controller (power control unit 150) [Fig. 1];

a subsystem (monitor 120) coupled to the power state controller [Fig. 1]; and

a communications link coupling the power state controller to the subsystem (the line coupled between power control unit 150 and monitor 120) [Fig. 1].

Woog does not explicitly teach the subsystem (monitor 120) is an autonomous subsystem.

Chrysanthakopoulos teaches a system for controlling a power state of a subsystem, wherein the subsystem is an autonomous subsystem ("intelligent" peripheral devices, e.g. monitor 50) [col. 3, lines 8-23].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Woog by using the "intelligent" monitor taught by Chrysanthakopoulos, instead of Woog's monitor. The modification would increase the reliability of the system by reducing workload for the host system.

Both Woog and Chrysanthakopoulos do not teach the system including an energy monitor coupled to the energy source and the power state controller, and providing a signal indicative of remaining energy capacity.

Arai teaches a power management system comprising a power controller which monitoring the remaining power in a power source [col. 5, lines 33-35]. Therefor, Arai obviously includes a monitoring device, either embedded within the power controller or coupled between the power source and the power controller, for monitoring the remaining power in a power source.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog-Chrysanthakopoulos and Arai because they both teach system for controlling power in a computer system. Arai's teaching of monitoring the power level of the power source would increase the flexibility of Woog-Chrysanthakopoulos' system by allowing the power control unit of Woog-Chrysanthakopoulos can also monitor power level of power source to ensure the power source has sufficient power for providing to the subsystem.

22. **Regarding claim 22**, Woog, Chrysanthakopoulos and Arai do not explicitly disclose that the communications link coupling the power controller to the autonomous subsystem comprising a link having lower bandwidth than a system bus in the computer system. One of ordinary skill in the art would have readily recognized that it would have been obvious at the time of the invention to use the communications link coupling the power state controller to the autonomous subsystem comprising a link having lower bandwidth than a system bus in the computer system. One of ordinary skill in the art would have readily recognized that the amount of data exchanged

on the link between the power state controller and the autonomous subsystem is far less than the amount of data exchanged on the main system bus. Therefore, using a low bandwidth communications link would reduce cost and power consumption of the computer system, which would be desirable in Woog.

23. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woog et al. [Woog] (U.S. Patent No. 5,630,144) in view of Chrysanthakopoulos (U.S. Patent No. 6,446,214), further in view of Arai et al. [Arai] (U.S. Patent No. 5,978,922) as applied to claim 15 above, and further in view of Goff et al. [Goff] (U.S. Patent No. 6,105,142).

24. **Regarding claim 16**, Woog, Chrysanthakopoulos and Arai do not specifically teach the user input is a switch to turn the system on and off.

Goff teaches a key on a keyboard may emulate a power switch (power button).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog-Chrysanthakopoulos-Arai and Goff because they both teach system for controlling power in a computer system. Goff's teaching of turning the system on and off directly from a keyboard would increase the convenience of the system by allowing a key on Woog-Chrysanthakopoulos-Arai's keyboard may emulate a power switch. Therefore, user input signal sent to Woog-Chrysanthakopoulos-Arai's power controller would including power on/off signal.

25. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woog et al. [Woog] (U.S. Patent No. 5,630,144) in view of Chrysanthakopoulos (U.S. Patent No. 6,446,214),

further in view of Arai et al. [Arai] (U.S. Patent No. 5,978,922) as applied to claim 21 above, and further in view of Jones (U.S. Patent No. 5,809,311).

26. **Regarding claim 23**, Woog, Chrysanthakopoulos and Arai do not explicitly disclose that the communications link is operable without the use of a main operating system.

Jones teaches a management controller (260) controls other subsystems (through link 250) independent from operating system [col. 4, lines 44-49].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Woog-Chrysanthakopoulos-Arai and Jones because they both teach system for controlling power in a computer system. Jones' teaching of controlling other subsystem by the management controller independent from operating system would reduce the burden on the operating system by allowing the power controller and the autonomous subsystem communicate to each other independent from the operating system.

Response to Argument

27. Applicant's arguments filed on March 29, 2004 have been fully considered but they are not persuasive.

28. In the remarks, applicants argued in substance that Chrysanthakopoulos does not teach or suggest the claimed limitation *autonomous subsystem* as amended.

29. As defined by applicant, specification p. 4, ll. 9-12, an autonomous subsystem is an independent subsystem. Chrysanthakopoulos teaches that peripheral devices are "intelligent" peripheral devices that can operate independently from a host [col. 3, lines 8-12]. Moreover, as well known in the art, peripheral device is a subsystem of a computer system. Therefore,

"intelligent" peripheral device taught by Chrysanthakopoulos is the claimed autonomous subsystem.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan N. Du whose telephone number is (703) 308-6292 or via e-mail, **thuan.du@uspto.gov**. The examiner can normally be reached on Monday-Friday: 9:00 am - 5:30 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (703) 308-1159.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

The fax number for the organization is (703) 872-9306.

Thuan N. Du
July 30, 2004

LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER ~~3600~~ 2100